WHAT IS CLAIMED IS:

1. An isolated nucleic acid molecule comprising a polynucleotide encoding a polypeptide having a PDGF-D activity and having a sequence identity of at least 85% with at least nucleotides 1 to 600 of SEQ ID NO:3, at least nucleotides 1 to 966 of SEQ ID NO:5, at least nucleotides 176-1288 SEQ ID NO:7, at least nucleotides 938 to 1288 of SEQ ID NO:7, at least nuleotides 1-1110 of SEQ ID NO:35, or at least nucleotides 1-1092 of SEQ ID NO:37, or a polynucleotide which hybridizes under stringent conditions with at least one of said sequences.

2. An isolated nucleic acid molecule according to claim 1, wherein the sequence identity is at least 90%.

3. An isolated nucleic acid molecule according to claim 1, wherein the sequence identity is at least 95%.

4. An isolated nucleic acid molecule according to Claim 1, wherein the nucleic acid molecule comprises a polynucleotide having at least nucleotides 1 to 600 of SEQ ID NO:3, at least nucleotides 1 to 966 of SEQ ID NO:5, at least nucleotides 176-1288 SEQ ID NO:7, at least nucleotides 938 to 1288 of SEQ ID NO:7, at least nuleotides 1-1110 of SEQ ID NO:35, or at least nucleotides 1-1092 of SEQ ID NO:37.

5. An isolated nucleic acid molecule according to claim 1, wherein said nucleic acid molecular is a mammalian polynucleotide.

6. An isolated nucleic acid molecule according to claim 5, wherein said nucleic acid molecular is a human polynucleotide.

7. A vector comprising a nucleic acid according to claim 1, wherein said nucleic acid molecular is operably linked with a promoter sequence.

8. A vector according to claim 7, wherein said vector is a eukaryotic vector or a prokaryotic vector.

9. A vector according to claim 7, wherein said vector is a plasmid or a baculovirus vector.

10. A host cell transformed or transfected with a vector according to claim 7.

11. A host cell according to claim 10, wherein said host cell is a eukaryotic cell or a prokaryotic cell.

12. A host cell according to claim 10, wherein said host cell is a COS cell or a 293EBNA cell.

13. A host cell according to claim 10, wherein said host cell is an insect cell.

14. An isolated nucleic acid molecule according to claim 1, wherein the polypeptide comprises a proteolytic site having the amino acid sequence RKSK or a structurally conserved amino acid sequence thereof.

15. An isolated polypeptide produced by expression of the nucleic acid molecule of claim 1.

16. An isolated polypeptide having a biological activity of PDGF-D and comprising an amino acid sequence having at least 85% identity with SEQ ID NOs:4, 6, 8, 36, 38, or at least the amino acid residues 255 to 371 of SEQ ID NO:8, or a fragment or analog thereof having the biological activity of PDGF-D.

17. A method for producing an activated truncated form of PDGF-D, comprising the steps of:

expressing an expression vector comprising a nucleic acid molecule according to Claim 1,

supplying a proteolytic amount of at least one enzyme for processing said polypeptide to generate an activated truncated form of PDGF-D.

18. A pharmaceutical composition comprising an effective cell-proliferation-promoting amount of a polypeptide according to Claim 16, and at least one further growth factor selected from the group consisting of VEGF, VEGF-B, VEGF-C, VEGF-D, PDGF-A, PDGF-B and PlGF.

19. A pharmaceutical composition according to claim 18, further comprising heparin.

20. A pharmaceutical composition comprising an effective cell-proliferation-promoting amount of an isolated polypeptide according to Claim 16, and at least one pharmaceutical carrier or diluent.

21. A pharmaceutical composition according to claim 20, further comprising heparin.

22. An isolated nucleic acid molecule which codes for a polypeptide comprising a characteristic sequence of SEQ ID NO:25.

23. A host cell transformed or transfected with a vector comprising a nucleic acid sequence according to claim 22 operatively linked to a promoter, wherein said host cell expresses a polypeptide comprising an amino acid sequence having at least 85% identity with SEQ ID NOs:4, 6, 8, 36, or 38, or a fragment or analog thereof having the biological activity of PDGF-D.

24. A means for amplifying a nucleic acid molecule encoding a polypeptide comprising a sequence selected from the group consisting of SEQ ID NOs: 4, 6, 8, 36 and 38, said means comprising at least one primer specific for the sequence.

25. The means of Claim 24, wherein the primer has a sequence selected from the group consisting of SEQ ID NOs:26, 27, 30, 31, 33, 34, 41 and 42.

26. A method of identifying specific types of human tumors, comprising the steps of taking a sample of said tumor, testing said sample for the expression of PDGF-D, and identifying tumor type based on PDGF-D expression test result.

27. An isolated nucleic acid molecule which codes for a polypeptide comprising the sequence of SEQ ID NO:36.

28. An isolated nucleic acid molecule which codes for the polypeptide comprising the sequence of SEQ ID NO:38.

29. An isolated nucleic acid molecule which codes for the polypeptide comprising the sequence of SEQ ID NO:40.